

**REMARKS**

Claims 1-25 are pending in the instant application. Claims 1-25 have been rejected by the Examiner. Claims 1, 3-7, 13, and 14 have been amended. Claim 2 has been cancelled, leaving claims 1 and 3-25 for examination. The Applicant submits that claims 1 and 3-25 are in condition for allowance and requests reconsideration and withdrawal of the outstanding rejections. No new matter has been entered.

**Claim Rejections Under - 35 USC § 112**

Claims 1-25 have been rejected under 35 U.S. C. 112, first paragraph, as allegedly failing to comply with the enablement requirement. The Examiner states that the claims contain subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In particular, the Examiner states that independent claims 1, 15, 18, 20-23, and 25 "recite limitations relating to a graphical representation of a chemical design structure including a chemical backbone structure, and a chemical substituent which includes attaching the graphical representations to a selected backbone structure based on a permissible location, and a multi-dimensional graphics component for viewing the structured properties" (page 2 of Office Action dated December 7, 2005). The Examiner states that the specification lacks support for the manner in which the invention "creates the graphical representation of the chemical design structure, how the permissible locations for attaching chemical substituents are determined, or how the multi-dimensional graphics component for dimensioned viewing of structured properties is realized" (page 3 of Office Action). In conclusion, the Examiner states that a skilled artisan would not know how to make and/or use the claimed subject matter without undue experimentation.

The Applicants respectfully disagree with the Examiner and submit that the features recited in each of independent claims 1, 15, 18, 20-23, and 25 are fully supported in the specification. Paragraphs 0025, 0028, 0031, 0033-0035, 0040, and 0045, for example, describe how the graphical representation of the chemical design structure is created. Paragraph 0025 states that the invention "allows a user to construct the chemical structure of a molecule...or polymer of interest by choosing a backbone structure from a template palette and adding chemical substituents to the backbone from another set of templates..." The templates, including

the palettes, are stored in databases (e.g., a chemical database 110, which also stores "chemical substituents for each backbone structure, and available chemistries...associated with each chemical substituent" (Paragraph 0028). Thus, the design and creation of these structures is database driven via various pre-established templates. The particular options and information made available to an end-user of the invention are dependent upon previous selections made. For example, paragraph 0035 states that a user may view "a list of properties or structure/functional relationships associated with the chemical substituents, chemical backbones, and/or customer chemical design structure the user selects...when the user selects the linear silicone backbone, the user would view a list of properties or attributes associated with this backbone such as oxidation resistance, ozone resistance, and UV resistance...[and as] the user browses through the list of chemical substituent categories and/or chemical substituents, the user would view additional properties or attributes that would be added to the custom chemical design structure if that substituent were attached." Clearly, this information facilitates or guides the user in determining selections for addition to the backbone. In addition, paragraph 0031 describes how a customer may link to a website related to a query in order to acquire additional information to facilitate the design process. The listing of links presented to the user dynamically changes based upon the nature of the query (paragraph 0050). In addition instructions may be presented via a text window (paragraph 0048; FIG. 12, text window 1206).

The end user is guided through the creation process as described in FIGs. 2-17. Using, for example, a drag and drop function of the invention, the end user makes selections which are added to the backbone structure. Paragraph 0046 describes how the end user may use a drag feature to move "the substituent 1006 to a desired "R" location on the selected backbone structure [which "R" location] indicates a location where a chemical substituent may be attached. Thus, paragraph 0046 provides support for how the permissible locations for attaching chemical substituents are determined, which the Examiner has indicated is lacking in the specification.

Paragraph 0033 provides support for the multi-dimensional graphics component for dimensioned viewing of structured properties. As an example, "a conventional linear 'click thru' application may be utilized that allows the user to add or modify one step at a time using recognizable HTML select boxes and radio buttons" (paragraph 0033). Alternatively, dynamic HTML may be used, "whereby the chemical wizard allows the user to select an animated

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molecule, click on the desired structural change and have it animated. Another option includes a three-dimensional visualization of the molecule" (paragraph 0034).

Accordingly, the Applicants submit that the features recited in claims 1, 15, 18, 20-23, and 25 are fully supported in the Applicants' specification. Reconsideration and withdrawal of the outstanding rejections is respectfully requested.

#### **Claim Rejections Under 35 USC § 103**

Claims 1-4, 6, 7, and 12-25 have been rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over U.S. Patent Application Publication 2002/0129004 A1 issued to Bassett et al. (hereinafter "Bassett") in view of "ADO/Chem Sketch," Version 5.0 Users Guide, Advanced Chemistry Development Inc., 2001 (hereinafter "ChemSketch"). In addition, claims 5 and 8-11 have been rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Bassett in view of ChemSketch and in further view of "Introducing Macromedia Flash 5" 12 Cook, PC Support Advisor Update 150, pp. 9-12, May 2001.

Claim 1 has been amended to include the features recited in cancelled claim 2. Claim 1, as amended, recites, "a database storing:

a graphical representation of at least one chemical design structure;

a graphical representation of at least one chemical backbone structure; and

a graphical representation of at least one chemical substituent selectable for said at least one chemical backbone structure, said chemical substituent operable for specifying a custom chemical design structure;

whereto, upon accessing said chemical design and query tool by a user, said user interface guides said user in performing at least one of:

selecting the chemical design structure and submitting said chemical design structure to a provider system; and

selecting the chemical backbone structure, attaching said graphical representation of said at least one chemical substituent to selected chemical backbone structure, and

submitting a resulting custom chemical design structure to a provider system."

These features are neither taught by, nor made obvious in view of, the cited references. Bassett teaches utilizing one or more wizard tools for performing various processes. The Examiner states that Bassett does not teach the features related to a graphical representation of a chemical design structure. However, the Examiner introduces ChemSketch as allegedly teaching these features. The ChemSketch reference is a one hundred and fifteen page User's Guide for providing detailed instructions on the use of the product. The product, ChemSketch, is a software program for drawing chemical structures and graphical images (front page of ChemSketch). The detailed instructions provided in the User's Manual guide a user through a complex, labor-intensive process of drawing structures, element by element (e.g., atoms, bonds, labels, etc.). Even simple structures require extensive operation on the user's side. For example, see Chapter 3 - Drawing Simple Structures, a user is provided with no less than seven steps in creating the simplest structure (pages 13-14). Complex structures require even more extensive operations on the user's part. This is precisely the type of scenario that the Applicants' invention seeks to avoid. As recited in claim 1, the user is provided with pre-defined chemical backbone structures, whereby the user builds upon the structures using pre-defined, database driven sub-components (e.g., chemical substituents and chemistries) that are easily attached to the backbone to create a customized structure. Nowhere in ChemSketch does such a feature exist.

Accordingly, ChemSketch does not cure the deficiencies of Bassett with respect to claim 1.

Independent claims 15, 18, 20-23, and 25 are patentable over Bassett in view of ChemSketch for at least the reasons presented above with respect to claim 1. Claims 3-14 depend from what should be an allowable claim 1. Claim 19 depends from what should be an allowable claim 18. Claim 24 depends from what should be an allowable claim 23. For at least these reasons, the Applicants submit that claims 3-14, 19, and 24 are also in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested.

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FAX NO. 8602860115

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**CONCLUSION**

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested. It is submitted that the foregoing amendments and remarks should render the case in condition for allowance.

Accordingly, as the cited references neither anticipate nor render obvious that which the applicant deems to be the invention, it is respectfully requested that claims 1 and 3-25 be passed to issue.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,  
Christine J. Phillips, et al.

CANTOR COLBURN LLP  
Applicants' Attorneys

By Marisa J. Dubuc

Marisa J. Dubuc  
Registration No. 46,673  
Customer No. 23413

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Address: 55 Griffin Road South  
Bloomfield, CT 06002  
Telephone: (860) 286-2929  
Fax: (860) 286-0115